AUTOMATIC ADJUSTMENT OF FLOATING POINT OUTPUT IMAGES

ABSTRACT OF THE DISCLOSURE

A system adjusts floating-point-valued images prior to conversion to a display signal so that the dynamic range of the display device is effectively used. Images are adjusted using transfer functions to create an adjusted image within the dynamic range of the display device. The adjusted image also has a frequency distribution of pixel values to maximize the perception of visual detail. The system generates transfer functions from statistical attributes of one or more images. The transfer functions are applied to images on the fly as they are converted into a display signal. The statistical attributes of the image are computed on the fly as it is converted into a display signal. A first transfer function is applied to an image to produce an adjusted image in parallel with the generation of a second transfer function to be applied to a future image.

11439310 v3